Special Issue on Advanced Robotics and Biomimetics

Preface

It is with great pleasure and excitement that I present this special issue entitled "Advanced Biorobotics and Biomimetics" that delves into the fascinating world of cutting-edge research at the intersection of biology, robotics, and biomimetics. The realms of biorobotics and biomimetics have undergone remarkable transformations in recent years, inspired by nature's ingenious designs and systems. This issue aims to encapsulate the spirit of interdisciplinary collaboration and showcases a wealth of research endeavors undertaken by brilliant minds from various scientific disciplines.

This special issue comprises five research papers. In the field of biorobotics, researchers have reported on the development of bio-inspired robots, leveraging biological principles to engineer autonomous systems capable of interacting seamlessly with their environments. From bio-hybrid robotics to the integration of neural networks in robotic control, these advancements have broadened the horizons of robotics, promising breakthroughs in areas such as environmental monitoring, search and rescue operations, and healthcare assistance.

Simultaneously, the field of biomimetics has witnessed the emulation of nature's principles to develop novel materials, structures, and technologies. Recently, biomimetics has been expected to bring about a new science and technology system that contributes to "carbon neutrality" that can deal with various problems facing modern society, such as energy, environment, and resources. One of the papers is on a biomimetic surface that was processed to realize hydrophobicity and similar to those found in nature. As we embark on this intellectual journey through biomimetic research, we hope to inspire more explorations into nature's designs as a blueprint for future technology.

I extend my heartfelt gratitude to all the authors, reviewers, and editorial team members for their invaluable contributions in shaping this special issue. I believe that this compilation will stimulate further discussions, foster collaborations, and inspire new avenues of research in the captivating realms of biorobotics and biomimetics.

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